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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/849,786	05/04/2001	James M. Cisar	72255/11265	8858

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EXAMINER

TRINH, TAN H

ART UNIT	PAPER NUMBER
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2618

DATE MAILED: 03/21/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/849,786	Applicant(s) CISAR, JAMES M.	
	Examiner TAN TRINH	Art Unit 2684	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 November 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,2,4,6,7,9-14,16,18,19 and 21-32 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,2,4,6,7,9-14,16,18,19 and 21-32 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 19 July 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1, 2, 4, 6, 7, 9-11, 13, 14, 16, 18, 19, and 21-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bridgelall (U.S. Patent No. 6895255) in view of Aldous (U.S. Patent No. 6266017).

Regarding claim 1, Bridgelall discloses a dual mode mobile unit that's arranged to communicate in either a first or second data communication standard such as combined Bluetooth and 802.11 operations. Bridgelall, thus, includes a communications module comprising: a first section for processing data in accordance with at least a first communication standard (Figure 1 - ref.# 16 and 18 - col. 3, lines 51-65), wherein processing data in accordance with at least a first communication standard includes at least one of modulating and demodulating the data wherein said first section includes a connecting member for electrically connecting said first section with an external HOST processor; (Figure 1, ref # and 52 and 60 and col. 4, lines 52-59) and a second section for transmitting and receiving data via an antenna in accordance with the first communication standard (Figure 1 - ref# 12 - col. 3, lines 51-65), said second section detachable from the first section, wherein said second section is replaceable With a third section for transmitting and receiving data via an antenna in accordance with a second communication standard (col. 3, line 66 to col. 4, line 4), wherein the first section and second

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section are electrically connected via respective mating connecting members. (Figure 1, ref.# 34 - col. 3, line 66 to col. 4, line 4 – allows for either a single antenna or may be switched between modules).

Still regarding claim 1, The Bridgelall fails to teach the newly added the limitation, the antenna mounted on the second section, the second section detachable and replaceable with the third section, antenna is mounted on the third section; and wherein the first section is connected to not more than one of the group consisting of the second section and the third section concurrently. Such teaching is taught by Aldous (see fig. 8, col. 12, lines 5-32).

Therefore, it would have been obvious to one of ordinary skill in the art at the time invention was made to modify above teaching of Bridgelall and by the proving of the teaching of Aldous with detachable and replaceable second section, in order to allows various RF sections to be provide in various different detachable portions and allows a single device to be used with a wide variety of wireless communication network (see Aldous col. 12, lines 23-32).

Regarding claim 2, Bridgelall meets the limitation - A communications module according to claim 1, wherein said first communication standard uses a first frequency band (col. 3, lines 51-65 where IF module 12 represents the 802.11 standard which operates within the 5 GHz frequency range).

Regarding claim 4, Bridgelall meets the limitation - A communications module according to claim 1, wherein said second communication standard uses a second frequency band (col. 3, line 51 to col. 4, line 4 where RF module 14 represents Bluetooth standard which operates within

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the 2400-2483.5 frequency range).

Regarding claim 6, Bridgelall meets the limitation - A communications module according to claim 1, wherein said first section includes a Medium Access Control (MAC) processing system and a physical layer (PHY) processing device (see fig. 1, MAC 18, col. 4, lines 50-65, col. 1, lines 7-13, col. 1, lines 51-61 , and col. 4, lines 50-67- inherency - since 802.11 and Bluetooth are multiple sources that work together in one device).

Regarding claim 7, Bridgelall meets the limitation - A communications module according to claim 6, wherein said first section includes at least one memory device (col. 4, lines 63-65 - FIFO memory and fig. 1, Flash memory 20 and SRAM 58, col. 4, lines 50-59).

Regarding claim 9, Bridgelall meets the limitation - A communications module according to claim 1, wherein said second section includes a first circuit for converting signals between radio frequencies and intermediate frequencies (Figure 1, ref# 24 - inherent function of receivers).

Regarding claim 10, Bridgelall meets the limitation – a communications module according to claim 9, wherein said second section includes a second circuit for converting a signal between intermediate frequencies and base band frequencies. (Figure 1, ref# 24 - Inherent function of receivers).

Regarding claim 11. A communications module according to claim 1, wherein said second section includes a first circuit for converting signals between radio frequencies and base band frequencies (Fig. 1, ref.# 24 - Inherent function of receivers).

Regarding claim 13, Bridgelall discloses a dual mode mobile unit that's arranged to communicate in either a first or second data communication standard such as combined Bluetooth and 802.11 operations. Bridgelall, thus, includes a communications module comprising: a first section including means for processing data in accordance with at least a first communication standard (Figure 1 - ref.# 16 and 18 - col. 3, lines 51-65) wherein processing data in accordance with at least a first communication standard includes at least one of modulating and demodulating the data wherein said first section includes a connecting member for electrically connecting said first section with an external HOST processor; (Fig. 1, ref # and 52 and 60 and col. 4, lines 52-59) and a second section including means for transmitting and receiving data via an antenna in accordance with the first communication standard (Figure 1 - ref. # 12 - col. 3, lines 51-65), said second section detachable from the first section, wherein said second section is replaceable with a third section including means for transmitting and receiving data via an antenna in accordance with a second communication standard; (col. 3, line 66 to col. 4, line 4) wherein said first section and said second section are electrically connected via respective means for connecting (Figure 1, ref# 34 - col. 3, line 66 to col. 4, line 4 - allows for either a single antenna or may be switched between modules).

Still regarding claim 1, The Bridgelall fails to teach the newly added the limitation, the antenna mounted on the second section, the second section detachable and replaceable with the third section, antenna is mounted on the third section; and wherein the first section is connected to not more than one of the group consisting of the second section and the third section concurrently. Such teaching is taught by Aldous (see fig. 8, col. 12, lines 5-32).

Therefore, it would have been obvious to one of ordinary skill in the art at the time invention was made to modify above teaching of Bridgelall and by the proving of the teaching of Aldous with detachable and replaceable second section, in order to allows various RF sections to be provide in various different detachable portions and allows a single device to be used with a wide variety of wireless communication network (see Aldous col. 12, lines 23-32).

Regarding claim 14, Bridgelall meets the limitation - A communications module according to claim 13, wherein said first communication standard uses a first frequency band (col. 3, lines 51-65 where RF module 12 represents the 802.11 standard which operates within the 5 GHz frequency range).

Regarding claim 16, Bridgelall meets the limitation - A communications module according to claim 13, wherein said second communication standard uses a second frequency band (col. 3, line 51 to col. 4, line 4 where RF module 14 represents Bluetooth standard which operates within the 2400-2483.5 frequency range).

Regarding claim 18, Bridgelall meets the limitation - A communications module

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according to claim 13, wherein said first section includes a Medium Access Control (MAC) processing system and a physical layer (PHY) processing device (see fig. 1, MAC 18, col. 4, lines 50-65, col. 1, lines 7-13, col. 1, lines 51-61, and col. 4, lines 50-67- inherency - since 802.11 and Bluetooth are multiple sources that work together in one device).

Regarding claim 19, Bridgelall meets the limitation - A communications module according to claim 18, wherein said first section includes at least one means for storing data (col. 4, lines 63-65 - FIFO memory and fig. 1, Flash memory 20 and SRAM 58, col. 4, lines 50-59).

Regarding claim 21, Bridgelall meets the limitation - A communications module according to claim 13, wherein said second section includes first conversion means for converting signals between radio frequencies and intermediate frequencies (Figure 1, ref.# 24 - Inherent function of receivers).

Regarding claim 22, Bridgelall meets the limitation - A communications module according to claim 21, wherein said second section includes a second conversion means for converting a signal between intermediate frequencies and baseband frequencies. (Figure 1, ref.# 24 - Inherent function of receivers).

Regarding claim 23, Bridgelall meets the limitation - A communications module according to claim 13, wherein said second section includes conversion means for converting signals between radio frequencies and baseband frequencies (Figure 1, ref# 24 - Inherent

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function of receivers).

Regarding claim 24, Bridgelall meets the limitation - A communications module according to claim 13, wherein said second section includes means for amplifying a signal (Fig. 1, ref. 22 - it is an inherent function of the transmitter to amplifier signal).

3. Claims 12, 25-32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Aldous (U.S. Patent No. 6266017) in view of Bridgelall (U.S. Patent No. 6895255).

Regarding claim 25, Aldous teaches a communication module (see fig. 8), comprising: First housing for housing a digital section of the communication module (see fig. 8, First housing for housing a digital section 144) comprising; a first connecting member for electrically coupling the first section with an external HOST processor (see fig. 8, first section 144 is connected to PC slot, col. 12, lines 54-61), a second connecting member (see fig. 8, connector 146), a physical layer coupled to the second connecting member (see fig. 8, first section 144 coupled to connector 146 for connecting with second section 140), and second housing for housing RF section of the communication module (see fig. 8, second housing section RF 140), the second housing detachable to the first housing (see fig. 8, detachable first section 144 and 140 by the connector 146) and comprises; a connecting member for electrically coupling the second section to the second connecting member of the first section (see fig. 8, connector 146). But Aldous fails to show the physical layer processor coupled to the second connecting member and Media access control processor coupled to the physical layer process and the first connecting member and

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a circuit for converting between a base band frequency and a RF frequency coupling to the connecting member, and an antenna coupled to the circuit for converting between the base band frequency and an RF frequency.

However, Bridgelall shows the physical layer processor coupled to the second connecting member (see fig. 1, the processor 42 coupled to second member 12 and 14), and Media access control processor coupled to the physical layer process and the first connecting member (see fig. 1, MAC processor 18 coupled to the physical layer process 42 with interface 50), and a circuit for converting between a base band frequency and a RF frequency coupled to the connecting member (see fig. 1, WLAN radio interface 34 and baseband MODEM 38 coupled the connecting member 12 and 42), and an antenna coupled to the circuit for converting between the base band frequency and an RF frequency (see fig. 1, antenna 26 coupled to the circuit for converting between the base band frequency and an RF frequency, RF section 12, WLAN radio interface 34 baseband MODEM 38).

Therefore, it would have been obvious to one of ordinary skill in the art at the time invention was made to modify above teaching of Aldous and Bridgelall on the coupled the all member are connected, in order to allows various RF sections to be provide in various different detachable portions and allows a single device to be used with a wide variety of wireless communication network (see Aldous col. 12, lines 23-32).

Regarding claim 26, Bridgelall meets the limitation - A communications module according to claim 25, further comprising one of the group consisting of a non-volatile memory and a volatile memory coupled to the media access controller (col. 4, line 50 to col. 5, line 7 -

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flash and FIFO).

Regarding claim 27, Bridgelall meets the limitation - A communications module according to claim 25, a circuit for converting a baseband signal to an RF signal comprising: a circuit for converting the baseband signal to an intermediate frequency coupled to the connecting member; (Fig. 1, Ref. 22 and col. 3, lines 51- 65) a circuit for converting the intermediate frequency to the RF frequency coupled to the circuit for converting the baseband signal to the intermediate frequency. (Fig. 1, Ref. 22 and col. 3, lines 51- 65).

Regarding claims 12, 28, the examiner takes Official Notice that it is well known to utilize low noise amplifiers (LNA) in receiver on second section, (see Aldous fig. 8, antenna 142, col. 12, lines 18-19), since the received signal from antenna 142 is need LNA to amplify signal, and the circuit for converting the RF frequency to intermediate frequency than Demodulation the signal).

Regarding claim 30, Bridgelall meets the limitation - A communications module according to claim 25, wherein the baseband frequency of the circuit for converting between a baseband frequency and an R.F frequency is coupled to the connecting member for electrically coupling the second section to the second connecting member of the first sections and the R-F frequency of the circuit for converting between a baseband frequency and an RF frequency is coupled to the antenna (Figure 1, refs 38, 34 and 12 and col. 3, lines 51-65).

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Regarding claim 31, Aldous teaches wherein the communications module is a personal computer client adapter and the first connecting member is one of the group consisting of a Personal Computer Memory Card International Association type II connector, a Personal Computer Memory Card International Association extended type II connector, and a Personal Computer Interface connector (see fig. 8, col. 3, lines 25-39).

Regarding claim 31, Aldous teaches wherein the communications module wherein the second connecting member of the first housing and the connecting member of the second housing are one of the group consisting of a zero insertion force and a low insertion force connector (see fig. 8, connector 146).

Response to Arguments

4. Applicant's arguments with respect to claims 1-32 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

5. **Any response to this action should be mailed to:**

Commissioner of Patents and Trademarks
Washington, D.C. 20231

or faxed to:

(571) 273-8300, (for Technology Center 2600 only)

Hand-delivered responses should be brought to the Customer Service Window (now located at the Randolph Building, 401 Dulany Street, Alexandria, VA 22314).

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tan Trinh whose telephone number is (571) 272-7888. The examiner can normally be reached on Monday-Friday from 9:30 AM to 6:00 PM.


If attempts to reach the examiner by telephone are unsuccessful, the examiners supervisor, Anderson, Matthew D., can be reached at (571) 272-4177.

The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the **Technology Center 2600 Customer Service Office** whose telephone number is (703) 306-0377.

7. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Tan H. Trinh
Division 2618
March 17, 2006



Anderson, Matthew D. (SPE 2618)